

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1. (Currently Amended) For use with a demand forecast application capable of traversing a demand forecast tree having at least one node with a time series of actual sales values associated therewith representing the actual sales of a perishable consumer item at an outlet over an observation period, a computer implemented method for ~~estimating~~ calculating the hidden demand for the perishable consumer item at the outlet at an occurrence of a sellout, the method comprising the steps of:

determining a subset of sales values of the time series of actual sales values over the observation period for the perishable consumer item at the outlet, the subset of sales values excluding the actual sales value at at least ~~one~~ the occurrence of the sellout, the occurrence of the sellout being determined by comparing a sales value of the time series of ~~sales~~ sales values against a corresponding draw quantity of a time series of draw quantities;

applying a statistical seasonal causal time series forecasting model of count data on the subset of sales values to determine a forecasted mean demand value for the perishable consumer item at the outlet at the occurrence of the sellout; and

estimating the hidden demand at the occurrence of the sellout using a single parameter probability distribution conditioned on ~~with a parameter assuming~~ the forecasted mean demand value.

2. (Currently Amended) The method according to claim 1 wherein the single parameter probability distribution is Poisson conditioned on the forecasted mean demand value, ~~with a parameter  $\lambda$  assuming the forecasted mean demand value~~ whereby:

$$H = \lambda \left( 1 + \frac{f(D)}{1 - F(D)} \right) - D$$

where the parameter  $\lambda$  is the forecasted mean demand value, H is the hidden demand,  $f(\cdot)$  is the Poisson probability distribution function, and  $F(\cdot)$  is the Poisson cumulative distribution function, and D is the draw of the perishable consumer item leading up to the occurrence of the sellout.

3. (Currently Amended) The method according to claim 1 wherein the subset of sales values excludes the actual sales values at all occurrences of sellouts over the observation period.

4. (Currently Amended) The method according to claim 1 and further comprising ~~the step (d) of:~~  
calculating the value of at least one performance metric on the basis of adjusted sales data compensating for hidden demand at occurrences of sellouts over an evaluation period.

5. (Currently Amended) The method according to claim 4 wherein the step of calculating the total stockout ~~(d)~~ includes calculating the total stockout for the perishable consumer item at the outlet over the evaluation period for evaluating the efficacy of a distribution policy for the perishable consumer item at the outlet over the evaluation period.

6. (Currently Amended) The method according to claim 4 wherein the step of calculating the total stockout ~~(d)~~ includes calculating the value of at least one performance metric relating to the sale of the perishable consumer item at the outlet which could be expected to occur over the evaluation period by virtue of the perishable consumer item being delivered in accordance with a recommended distribution policy as opposed to an actual distribution policy for comparing the efficacy of the recommended distribution policy to the efficacy of the actual distribution policy over the evaluation period.

7. (Currently Amended) The method according to claim 6 wherein the step of calculating the total stockout [(d)] includes calculating the value of at least one performance metric from the following list of performance metrics: change in sales, change in returns, change in number of sellouts, and change in stockout.

8. (Original) The method according to claim 1 wherein the perishable consumer item is a printed media publication.

9. (Currently Amended) For use with a demand forecast application capable of traversing a demand forecast tree having at least one node with a time series of actual sales values associated therewith representing the actual sales of a perishable consumer item at an outlet over an observation period, a computer implemented system for ~~estimating~~ calculating the hidden demand for the perishable consumer item at the outlet at an occurrence of a sellout, the system capable of executing the steps of:

(a) determining a subset of sales values of the time series of actual sales values over the observation period for the perishable consumer item at the outlet, the new subset of sales values excluding the actual sales value at at least ~~one~~ the occurrence of the sellout, the occurrence of the sellout being determined by comparing a sales value of the time series of sales values against a corresponding draw quantity of a time series of draw quantities;

(b) applying a statistical seasonal causal time series forecasting model of count data on the subset of sales values to determine a forecasted mean demand value for the perishable consumer item at the outlet at the occurrence of the sellout; and

(c) estimating the hidden demand at the occurrence of the sellout using a single parameter probability distribution conditioned on ~~with a parameter assuming~~ the forecasted mean demand value.

10. (Currently Amended) The system according to claim 9 wherein the single parameter conditional probability distribution is Poisson conditioned on the forecasted mean demand value, ~~with a parameter  $\lambda$  assuming the forecasted mean demand value~~ whereby:

$$H = \lambda \left( 1 + \frac{f(D)}{1 - F(D)} \right) - D$$

where the parameter  $\lambda$  is the forecasted mean demand value, H is the hidden demand,  $f(\cdot)$  is the Poisson probability distribution function, and  $F(\cdot)$  is the Poisson cumulative distribution function, and D is the draw of the perishable consumer item leading up to the occurrence of the sellout.

11. (Currently Amended) The system according to claim 9 wherein the subset of sales values excludes the actual sales values at all occurrences of sellouts over the observation period.

12. (Currently Amended) The system according to claim 9 and further capable of executing a [the] step (d) of:

calculating the value of at least one performance metric on the basis of adjusted sales data compensating for hidden demand at occurrences of sellouts over an evaluation period.

13. (Original) The system according to claim 12 wherein the step (d) includes calculating the total stockout for the perishable consumer item at the outlet over the evaluation period for evaluating the efficacy of a distribution policy for the perishable consumer item at the outlet over the evaluation period.

14. (Original) The system according to claim 12 wherein the step (d) includes calculating the value of at least one performance metric relating to the sale of the perishable consumer item at the outlet which could be expected to occur over the evaluation period by virtue of the perishable consumer item being delivered to the outlet in accordance with a recommended distribution policy as opposed to an actual distribution policy for comparing the efficacy of the recommended distribution policy to the efficacy of the actual distribution policy over the evaluation period.

15. (Original) The system according to claim 13 wherein the step (d) includes calculating the value of at least one performance metric from the following list of performance metrics: change in sales, change in returns, change in number of sellouts, and change in stockout.

16. (Original) The system according to claim 9 wherein the perishable consumer item is a printed media publication.

17. (Currently Amended) For use with a demand forecast application capable of traversing a demand forecast tree having at least one node with a time series of actual sales values associated therewith representing the actual sales of a perishable consumer item at an outlet over an observation period, a computer implemented method for evaluating the efficacy of a distribution policy for the consumer item at the outlet over an evaluation period, the method comprising the steps of:

(a) estimating the hidden demand at one or more occurrences of sellouts occurring during the evaluation period by determining a subset of sales values of the time series of actual sales values during the observation period for the perishable consumer item at the outlet, the subset of sales values excluding the actual sales value(s) at the one or more occurrences of sellout during the observation period, the one or more occurrences of sellout being determined by comparing each sales value of the time series of sales values against each corresponding draw quantity of a time series of draw quantities, applying a statistical seasonal causal time series forecasting model of count data on the subset of sales values to determine a forecasted mean demand value for the perishable consumer item at the outlet at the occurrence of the sellout, and determining the hidden demand at the occurrence of the sellout using a single parameter probability distribution conditioned on the forecasted mean demand value; and

(b) calculating the value of at least one performance metric on the basis of adjusted sales data compensating for the hidden demand at occurrences of sellouts over the evaluation period.

18. (Currently Amended) The method according to claim 17 wherein the step (b) includes calculating a [the] total stockout for the perishable consumer item at the outlet over the evaluation period.

19. (Original) The method according to claim 17 wherein the step (b) includes calculating the value of at least one performance metric relating to the sale of the

perishable consumer item at the outlet which could be expected to occur over the evaluation period by virtue of the perishable consumer item being delivered in accordance with a recommended distribution policy as opposed to an actual distribution policy for comparing the efficacy of the recommended distribution policy for the perishable consumer item at the outlet to the efficacy of the actual distribution policy for the perishable consumer item at the outlet.

20. (Original) The method according to claim 19 wherein the step (b) includes calculating the value of at least one performance metric from the following list of performance metrics: change in sales, change in returns, change in number of sellouts, and change in stockout.

21. (Canceled)

22. (Currently Amended) The method according to claim 17 [21] wherein the single parameter conditional probability distribution is Poisson conditioned on the forecasted mean demand value with a parameter  $\lambda$  ~~assuming the forecasted mean demand value~~ whereby:

$$H = \lambda \left( 1 + \frac{f(D)}{1 - F(D)} \right) - D$$

where the parameter  $\lambda$  is the forecasted mean demand value, H is the hidden demand,  $f(\cdot)$  is the Poisson probability distribution function, and  $F(\cdot)$  is the Poisson cumulative distribution function, and D is the draw of the perishable consumer item leading up to the occurrence of the sellout.

23. (Currently Amended) The method according to claim 17 [21] wherein the subset of sales values excludes the actual sales values at all occurrences of sellouts over the observation period.

24. (Currently Amended) The method according to claim 17 [21] wherein the perishable consumer item is a printed media publication.

25. (Currently Amended) For use with a demand forecast application capable of traversing a demand forecast tree having at least one node with a time series of actual sales

values associated therewith representing the actual sales of a perishable consumer item at an outlet over an observation period, a computer implemented system for evaluating the efficacy of a distribution policy for the consumer item at the outlet over an evaluation period, the system capable of executing the steps of:

(a) estimating the hidden demand at one or more occurrences of sellouts over the evaluation period by determining a subset of sales values of the time series of actual sales values during the observation period for the perishable consumer item at the outlet, the subset of sales values excluding the actual sales value(s) at the one or more occurrences of sellout during the observation period, the one or more occurrences of sellout being determined by comparing each sales value of the time series of sales values against each corresponding draw quantity of a time series of draw quantities, applying a statistical seasonal causal time series forecasting model of count data on the subset of sales values to determine a forecasted mean demand value for the perishable consumer item at the outlet at the occurrence of the sellout, and determining the hidden demand at the occurrence of the sellout using a single parameter probability distribution conditioned on the forecasted mean demand value; and

(b) calculating the value of at least one performance metric on the basis of adjusted sales data compensating for the hidden demand at occurrences of sellouts over the evaluation period.

26. (Currently Amended) The system according to claim 25 wherein the step (b) includes calculating a [the] total stockout for the perishable consumer item at the outlet over the evaluation period.

27. (Original) The system according to claim 25 wherein the step (b) includes calculating the value of at least one performance metric relating to the sale of the perishable consumer item at the outlet which could be expected to occur over the evaluation period by virtue of the perishable consumer item being delivered in accordance with a recommended distribution policy as opposed to an actual distribution policy for comparing the efficacy of the recommended distribution policy for the perishable consumer item at the outlet to the efficacy of the actual distribution policy for the perishable consumer item at the outlet.

28. (Original) The system according to claim 27 wherein the step (b) includes calculating the value of at least one performance metric from the following list of performance metrics: change in sales, change in returns, change in number of sellouts, and change in stockout.

29. (Canceled)

30. (Currently Amended) The system according to claim 25 [29] wherein the single parameter conditional probability distribution is Poisson conditioned on the forecasted mean demand value whereby:

$$H = \lambda \left( 1 + \frac{f(D)}{1 - F(D)} \right) - D$$

where the parameter  $\lambda$  is the forecasted mean demand value, H is the hidden demand,  $f(\cdot)$  is the Poisson probability distribution function, and  $F(\cdot)$  is the Poisson cumulative distribution function, and D is the draw of the perishable consumer item leading up to the occurrence of the sellout.

31. (Previously Presented) The system according to claim 25 wherein the subset of sales values excludes all the sales values at all occurrences of sellouts over the observation period.

32. (Currently Amended) The system according to claim 25 [29] wherein the perishable consumer item is a printed media publication.